

## REMARKS

### INTRODUCTION

In accordance with the foregoing, the specification has been amended. Claims 20-23 have been cancelled. Claims 1-19 are pending and under consideration.

### OBJECTION TO THE SPECIFICATION

The title was objected to as not descriptive. Appropriate correction has been made to the title. Withdrawal of the foregoing objection is requested.

### CLAIM OBJECTIONS

Claims 21-23 were objected to under 37 CFR 1.75(c) as being of improper dependent form. Claims 21-23 have been cancelled. Withdrawal of the foregoing rejection is requested.

### CLAIM REJECTION – 35 USC 112

Claim 20 was rejected under 35 USC 112, second paragraph, as being indefinite. Claim 20 has been cancelled. Withdrawal of the foregoing rejection is requested.

### CLAIM REJECTION – 35 USC 103

Claims 1, 2, 4-9, 11-14 and 16-19 were rejected under 35 USC 103(a) as being unpatentable over Liu et al. (US 6,414,470) (hereinafter “Liu”) in view of Furuhata (US 5,227,964) (hereinafter “Furuhata”).

#### Claims 1, 2 and 4-8

Claim 1 recites: “...a controller sensing the phase currents of each of the phase processing units of the DC/DC converter and controlling the power supplying unit so as to interrupt the DC power supply from the power supplying unit where a voltage corresponding to any one of the phase currents is higher than a predetermined reference voltage.” The Examiner relies on the DC/DC converter of Liu in combination with the switching supply of Furuhata to supply this feature of claim 1. However, if the input of the DC/DC converter of Liu could connect to the output of the switching supply of Furuhata, as stated in the Office Action, it would not be possible to control the power supply by sensing an error in each of the phase processing units.

The present invention, as recited in claim 1, provides a power supply system having a controller which senses the phase current of **each of the phase processing units** of the DC/DC converter and controls the power supplying unit so as to interrupt the DC power supply from the power supplying unit where a voltage corresponding to **any one of the phase currents** is higher than a predetermined reference voltage. As such, claim 1 detects an error in each of

the phase processing units, and protects a system from damage by interrupting the power supply where an error exists in any one of the phase processing units.

Further, it is respectfully submitted that there is no motivation to combine Liu with Furuhat. Such motivation is not found in either Liu or Furuhat or in the Office Action.

Claims 2 and 4-8 depend on claim 1 and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

**Claims 9, 11 and 12**

Claim 9 recites: "...controlling the power supplying unit so as to interrupt a power supply from the power supplying unit where the voltage corresponding to any one of the phase currents is higher than the predetermined reference voltage, as a result of the comparing." The Examiner relies on the DC/DC converter of Liu in combination with the power supplying unit of Furuhat to show this feature of claim 9. Similar to the argument for claim 1, claim 9 recites controlling the power supplying unit so as to interrupt the DC power supply from the power supplying unit where a voltage corresponding to **any one of the phase currents** is higher than a predetermined reference voltage. As such, claim 9 detects an error in each of the phase processing units, and protects a system from damage by interrupting the power supply where an error exists in any one of the phase processing units, a feature not discussed in Liu or Furuhat.

Further, it is respectfully submitted that there is no motivation to combine Liu with Furuhat. Such motivation is not found in either Liu or Furuhat.

Claims 11 and 12 depend on claim 9 and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

**Claims 13, 14 and 16-19**

Claim 13 recites: "...a controller sensing a voltage corresponding to the phase currents of each of the phase processing units and interrupting the DC power supply when the sensed voltage corresponding to any one of the phase currents is higher than a predetermined reference voltage." The Examiner relies on the DC/DC converter of Liu in combination with the power supplying unit of Furuhat to show this feature of claim 13. Similar to the argument for claim 1, claim 13 recites a controller sensing a voltage corresponding to **any one of the phase currents** is higher than a predetermined reference voltage. As such, claim 13 detects an error in each of the phase processing units, and protects a system from damage by interrupting the

power supply where an error exists in any one of the phase processing units, a feature not discussed in Liu or Furuhata.

Further, it is respectfully submitted that there is no motivation to combine Liu with Furuhata. Such motivation is not found in either Liu or Furuhata.

Claims 14 and 16-19 depend on claim 13 and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

#### **ALLOWABLE SUBJECT MATTER**

The Applicant acknowledges with appreciation that claims 3, 10 and 15 have been found to contain allowable subject matter. In view of the foregoing, it is respectfully submitted that claims 3, 10 and 15 are allowable in their present form.

#### **CONCLUSION**

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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